



SCHWEGMAN ■ LUNDBERG ■ WOESSNER ■ KLUTH

United States Patent Application

COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor I hereby declare that: my residence, post office address and citizenship are as stated below next to my name; that

I verily believe I am the original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled: **SYSTEM AND METHOD FOR GENERATING COMPOSITE SUBTRACTION IMAGES FOR MAGNETIC RESONANCE IMAGING.**

The specification of which was filed on September 17, 2003 as application serial no. 10/664,425.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with 37 C.F.R. § 1.56 (attached hereto). I also acknowledge my duty to disclose all information known to be material to patentability which became available between a filing date of a prior application and the national or PCT international filing date in the event this is a Continuation-In-Part application in accordance with 37 C.F.R. § 1.63(e).

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on the basis of which priority is claimed:

No such claim for priority is being made at this time.

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

Application Number
60/412,032

Filing Date
September 18, 2002

I hereby claim the benefit under 35 U.S.C. § 120 or 365(c) of any United States and PCT international application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose material information as defined in 37 C.F.R. § 1.56(a) which became available between the filing date of the prior application and the national or PCT international filing date of this application:

No such claim for priority is being made at this time.

I hereby appoint the following attorney(s) and/or patent agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith:

Anglin, J. Michael	Reg. No. 24,916	Harris, Robert J.	Reg. No. 37,346	Nielsen, Walter W.	Reg. No. 25,539
Arora, Suneel	Reg. No. 42,267	Jackson Huebsch, Katharine A.	Reg. No. 47,670	Padys, Danny J.	Reg. No. 35,635
Beekman, Marvin L.	Reg. No. 38,377	Jurkovich, Patti J.	Reg. No. 44,813	Parker, J. K.	Reg. No. 33,024
Bianchi, Timothy E.	Reg. No. 39,610	Kalis, Janal M.	Reg. No. 37,650	Peacock, Gregg A.	Reg. No. 45,001
Billion, Richard E.	Reg. No. 32,836	Klima-Silberg, Catherine I.	Reg. No. 40,052	Perdok, Monique M.	Reg. No. 42,989
Black, David W.	Reg. No. 42,331	Kluth, Daniel J.	Reg. No. 32,146	Peret, Andrew R.	Reg. No. 41,246
Brennan, Thomas F.	Reg. No. 35,075	Lacy, Rodney L.	Reg. No. 41,136	Peterson, David C.	Reg. No. 47,857
Chadwick, Robin A.	Reg. No. 36,477	Lemaire, Charles A.	Reg. No. 36,198	Prout, William F.	Reg. No. 33,995
Clark, Barbara J.	Reg. No. 38,107	Lundberg, Steven W.	Reg. No. 30,568	Schumm, Sherry W.	Reg. No. 39,422
Clise, Timothy B.	Reg. No. 40,957	Lundberg, Steven W.	Reg. No. 30,568	Schwegman, Micheal L.	Reg. No. 25,816
Cochran, David R.	Reg. No. 46,632	Maki, Peter C.	Reg. No. 42,832	Speier, Gary J.	Reg. No. 45,458
Dahl, John M.	Reg. No. 44,639	Malen, Peter L.	Reg. No. 44,894	Steffey, Charles E.	Reg. No. 25,179
DeLizio, Andrew	Reg. No. 52,806	Mates, Robert E.	Reg. No. 35,271	Stordal, Leif T.	Reg. No. 46,251
Drake, Eduardo E.	Reg. No. 40,594	McCrackin, Ann M.	Reg. No. 42,858	Tong, Viet V.	Reg. No. 45,416
Embretson, Janet E.	Reg. No. 39,665	Mehrle, Joseph P.	Reg. No. 45,535	Viksins, Ann S.	Reg. No. 37,748
Forrest, Bradley A.	Reg. No. 30,837	Muller, Mark V.	Reg. No. 37,509	Woessner, Warren D.	Reg. No. 30,440
Gorrie, Gregory J.	Reg. No. 36,530	Nama, Prakash	Reg. No. 44,255		
Greaves, John N.	Reg. No. 40,362	Nelson, A. James	Reg. No. 28,650		

I hereby authorize them to act and rely on instructions from and communicate directly with the person/assignee/attorney/firm/organization/who/which first sends/sent this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct Schwegman, Lundberg, Woessner & Kluth, P.A. to the contrary.

Please direct all correspondence in this case to Schwegman, Lundberg, Woessner & Kluth, P.A. at the address indicated below:

P.O. Box 2938, Minneapolis, MN 55402

Telephone No. (612)373-6900

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of joint inventor number 1 : **Martin R. Prince**

Citizenship: **United States of America**

Residence: **New York, NY**

Post Office Address: **1161 York Avenue
Apt. 10H
New York, NY 10021**

Signature: _____ Date: _____
Martin R. Prince

☒ Additional inventors are being named on separately numbered sheets, attached hereto.

Full Name of joint inventor number 2 : **Ramin Zabih**
Citizenship: **United States of America** Residence: **New York, NY**
Post Office Address: 400 E. 66th Street
Apt. #7B
New York, NY 10021

Signature: _____ Date: _____
Ramin Zabih

Full Name of joint inventor number 3 : **Yi Wang**
Citizenship: **United States of America** Residence: **Pittsburgh, PA**
Post Office Address: ~~6301 Morrowfield Avenue~~ **6641 Birchwood Ave #1**
Pittsburgh, PA 15217

Signature: _____ Date: **2/19/04**
Yi Wang

Full Name of joint inventor number 4 : **Richard Watts**
Citizenship: **United Kingdom** Residence: **Christchurch, New Zealand**
Post Office Address: 16a Harrowdale Drive
Christchurch, New Zealand

Signature: _____ Date: _____
Richard Watts

Full Name of joint inventor number 5 : **Junhwan Kim**
Citizenship: **Republic of Korea** Residence: **Seoul, South Korea**
Post Office Address: Walkerhill apt. 32-1202
Kwangjang-dong, Kwangjin-ku
Seoul, South Korea

Signature: _____ Date: _____
Junhwan Kim

Full Name of joint inventor number 6 : **Jeff Bezanson**
Citizenship: **United States of America** Residence: **Scarsdale, NY**
Post Office Address: 171 Fox Meadow Road
Scarsdale, NY 10583

Signature: _____ Date: _____
Jeff Bezanson

Full Name of joint inventor number 7 : Hale Ersoy

Citizenship: **Turkey**

Residence: **Ankara, Turkey**

Post Office Address: **Nilkent Sitesi B-Block No:2
Birlik Mah. Cankaya
Ankara 06550 Turkey**

Signature: _____
Hale Ersoy

Date: _____

§ 1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is canceled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is canceled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

- (1) prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

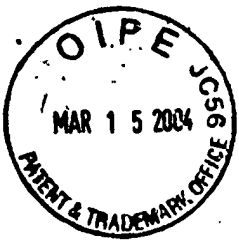
- (1) It establishes, by itself or in combination with other information, a *prima facie* case of unpatentability of a claim; or
- (2) It refutes, or is inconsistent with, a position the applicant takes in:
 - (i) Opposing an argument of unpatentability relied on by the Office, or
 - (ii) Asserting an argument of patentability.

A *prima facie* case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

- (1) Each inventor named in the application;
- (2) Each attorney or agent who prepares or prosecutes the application; and
- (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.



SCHWEGMAN ■ LUNDBERG ■ WOESSNER ■ KLUTH

United States Patent Application

COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor I hereby declare that: my residence, post office address and citizenship are as stated below next to my name; that

I verily believe I am the original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled: **SYSTEM AND METHOD FOR GENERATING COMPOSITE SUBTRACTION IMAGES FOR MAGNETIC RESONANCE IMAGING.**

The specification of which was filed on September 17, 2003 as application serial no. 10/664,425.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with 37 C.F.R. § 1.56 (attached hereto). I also acknowledge my duty to disclose all information known to be material to patentability which became available between a filing date of a prior application and the national or PCT international filing date in the event this is a Continuation-In-Part application in accordance with 37 C.F.R. § 1.63(e).

I hereby claim foreign priority benefits under 35 U.S.C. §119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on the basis of which priority is claimed:

No such claim for priority is being made at this time.

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

Application Number

60/412,032

Filing Date

September 18, 2002

I hereby claim the benefit under 35 U.S.C. § 120 or 365(c) of any United States and PCT international application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose material information as defined in 37 C.F.R. § 1.56(a) which became available between the filing date of the prior application and the national or PCT international filing date of this application:

No such claim for priority is being made at this time.

I hereby appoint the following attorney(s) and/or patent agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith:

Anglin, J. Michael	Reg. No. 24,916	Harris, Robert J.	Reg. No. 37,346	Nielsen, Walter W.	Reg. No. 25,539
Arora, Suneel	Reg. No. 42,267	Jackson Huebsch, Katharine A.	Reg. No. 47,670	Padys, Danny J.	Reg. No. 35,635
Beekman, Marvin L.	Reg. No. 38,377	Jurkovich, Patti J.	Reg. No. 44,813	Parker, J. K.	Reg. No. 33,024
Bianchi, Timothy E.	Reg. No. 39,610	Kalis, Janal M.	Reg. No. 37,650	Peacock, Gregg A.	Reg. No. 45,001
Billion, Richard E.	Reg. No. 32,836	Klima-Silberg, Catherine I.	Reg. No. 40,052	Perdok, Monique M.	Reg. No. 42,989
Black, David W.	Reg. No. 42,331	Kluth, Daniel J.	Reg. No. 32,146	Peret, Andrew R.	Reg. No. 41,246
Brennan, Thomas F.	Reg. No. 35,075	Lacy, Rodney L.	Reg. No. 41,136	Peterson, David C.	Reg. No. 47,857
Chadwick, Robin A.	Reg. No. 36,477	Lemaire, Charles A.	Reg. No. 36,198	Prout, William F.	Reg. No. 33,995
Clark, Barbara J.	Reg. No. 38,107	Lundberg, Steven W.	Reg. No. 30,568	Schumm, Sherry W.	Reg. No. 39,422
Clise, Timothy B.	Reg. No. 40,957	Lundberg, Steven W.	Reg. No. 30,568	Schwegman, Micheal L.	Reg. No. 25,816
Cochran, David R.	Reg. No. 46,632	Maki, Peter C.	Reg. No. 42,832	Speier, Gary J.	Reg. No. 45,458
Dahl, John M.	Reg. No. 44,639	Malen, Peter L.	Reg. No. 44,894	Steffey, Charles E.	Reg. No. 25,179
DeLizio, Andrew	Reg. No. 52,806	Mates, Robert E.	Reg. No. 35,271	Stordal, Leif T.	Reg. No. 46,251
Drake, Eduardo E.	Reg. No. 40,594	McCrackin, Ann M.	Reg. No. 42,858	Tong, Viet V.	Reg. No. 45,416
Embreton, Janet E.	Reg. No. 39,665	Mehrle, Joseph P.	Reg. No. 45,535	Viksnins, Ann S.	Reg. No. 37,748
Forrest, Bradley A.	Reg. No. 30,837	Muller, Mark V.	Reg. No. 37,509	Woessner, Warren D.	Reg. No. 30,440
Gorrie, Gregory J.	Reg. No. 36,530	Nama, Prakash	Reg. No. 44,255		
Greaves, John N.	Reg. No. 40,362	Nelson, A. James	Reg. No. 28,650		

I hereby authorize them to act and rely on instructions from and communicate directly with the person/assignee/attorney/firm/organization/who/which first sends/sent this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct Schwegman, Lundberg, Woessner & Kluth, P.A. to the contrary.

Please direct all correspondence in this case to Schwegman, Lundberg, Woessner & Kluth, P.A. at the address indicated below:

P.O. Box 2938, Minneapolis, MN 55402
Telephone No. (612)373-6900

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of joint inventor number 1 : Martin R. Prince

Citizenship: United States of America

Residence: New York, NY

Post Office Address: 1161 York Avenue

Apt. 10H

New York, NY 10021

Signature: _____

Martin R. Prince

Date: 2/6/04

☒ Additional inventors are being named on separately numbered sheets, attached hereto.

Full Name of joint inventor number 2 : **Ramin Zabih**

Citizenship: **United States of America**

Residence: **New York, NY**

Post Office Address: **400 E. 66th Street**

Apt. #7B

New York, NY 10021

Signature: _____
Ramin Zabih

Date: _____

Full Name of joint inventor number 3 : **Yi Wang**

Citizenship: **United States of America**

Residence: **Pittsburgh, PA**

Post Office Address: **6301 Morrowfield Avenue**

Pittsburgh, PA 15217

Signature: _____
Yi Wang

Date: _____

Full Name of joint inventor number 4 : **Richard Watts**

Citizenship: **United Kingdom**

Residence: **Christchurch, New Zealand**

Post Office Address: **16a Harrowdale Drive**

Christchurch, New Zealand

Signature: _____
Richard Watts

Date: _____

Full Name of joint inventor number 5 : **Junhwan Kim**

Citizenship: **Republic of Korea**

Residence: **Seoul, South Korea**

Post Office Address: **Walkerhill apt. 32-1202**

Kwangjang-dong, Kwangjin-ku

Seoul, South Korea

Signature: _____
Junhwan Kim

Date: _____

Full Name of joint inventor number 6 : **Jeff Bezanson**

Citizenship: **United States of America**

Residence: **Scarsdale, NY**

Post Office Address: **171 Fox Meadow Road**

Scarsdale, NY 10583

Signature: _____
Jeff Bezanson

Date: _____

Full Name of joint inventor number 7 : **Hale Ersoy**

Citizenship: **Turkey**

Residence: **Ankara, Turkey**

Post Office Address: **Nilkent Sitesi B-Block No:2
Birlik Mah. Cankaya
Ankara 06550 Turkey**

Signature: _____
Hale Ersoy

Date: _____

§ 1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is canceled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is canceled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

- (1) prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

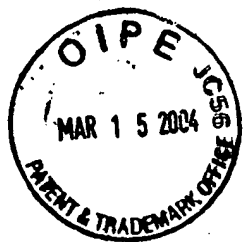
- (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
- (2) It refutes, or is inconsistent with, a position the applicant takes in:
 - (i) Opposing an argument of unpatentability relied on by the Office, or
 - (ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

- (1) Each inventor named in the application;
- (2) Each attorney or agent who prepares or prosecutes the application; and
- (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.



SCHWEGMAN ■ LUNDBERG ■ WOESSNER ■ KLUTH

United States Patent Application

COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor I hereby declare that: my residence, post office address and citizenship are as stated below next to my name; that

I verily believe I am the original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled: **SYSTEM AND METHOD FOR GENERATING COMPOSITE SUBTRACTION IMAGES FOR MAGNETIC RESONANCE IMAGING.**

The specification of which was filed on September 17, 2003 as application serial no. 10/664,425.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with 37 C.F.R. § 1.56 (attached hereto). I also acknowledge my duty to disclose all information known to be material to patentability which became available between a filing date of a prior application and the national or PCT international filing date in the event this is a Continuation-In-Part application in accordance with 37 C.F.R. § 1.63(e).

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on the basis of which priority is claimed:

No such claim for priority is being made at this time.

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

Application Number

60/412,032

Filing Date

September 18, 2002

I hereby claim the benefit under 35 U.S.C. § 120 or 365(c) of any United States and PCT international application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose material information as defined in 37 C.F.R. § 1.56(a) which became available between the filing date of the prior application and the national or PCT international filing date of this application:

No such claim for priority is being made at this time.

I hereby appoint the following attorney(s) and/or patent agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith:

Anglin, J. Michael	Reg. No. 24,916	Harris, Robert J.	Reg. No. 37,346	Nielsen, Walter W.	Reg. No. 25,539
Arora, Suneel	Reg. No. 42,267	Jackson Huebsch, Katharine A.	Reg. No. 47,670	Padys, Danny J.	Reg. No. 35,635
Beckman, Marvin L.	Reg. No. 38,377	Jurkovich, Patti J.	Reg. No. 44,813	Parker, J. K.	Reg. No. 33,024
Bianchi, Timothy E.	Reg. No. 39,610	Kalis, Janal M.	Reg. No. 37,650	Peacock, Gregg A.	Reg. No. 45,001
Billion, Richard E.	Reg. No. 32,836	Klima-Silberg, Catherine I.	Reg. No. 40,052	Perdok, Monique M.	Reg. No. 42,989
Black, David W.	Reg. No. 42,331	Kluth, Daniel J.	Reg. No. 32,146	Peret, Andrew R.	Reg. No. 41,246
Brennan, Thomas F.	Reg. No. 35,075	Lacy, Rodney L.	Reg. No. 41,136	Peterson, David C.	Reg. No. 47,857
Chadwick, Robin A.	Reg. No. 36,477	Lemaire, Charles A.	Reg. No. 36,198	Prout, William F.	Reg. No. 33,995
Clark, Barbara J.	Reg. No. 38,107	Lundberg, Steven W.	Reg. No. 30,568	Schumm, Sherry W.	Reg. No. 39,422
Clise, Timothy B.	Reg. No. 40,957	Lundberg, Steven W.	Reg. No. 30,568	Schwegman, Micheal L.	Reg. No. 25,816
Cochran, David R.	Reg. No. 46,632	Maki, Peter C.	Reg. No. 42,832	Speier, Gary J.	Reg. No. 45,458
Dahl, John M.	Reg. No. 44,639	Malen, Peter L.	Reg. No. 44,894	Steffey, Charles E.	Reg. No. 25,179
DeLizio, Andrew	Reg. No. 52,806	Mates, Robert E.	Reg. No. 35,271	Stordal, Leif T.	Reg. No. 46,251
Drake, Eduardo E.	Reg. No. 40,594	McCrackin, Ann M.	Reg. No. 42,858	Tong, Viet V.	Reg. No. 45,416
Embretson, Janet E.	Reg. No. 39,665	Mehrle, Joseph P.	Reg. No. 45,535	Viksins, Ann S.	Reg. No. 37,748
Forrest, Bradley A.	Reg. No. 30,837	Muller, Mark V.	Reg. No. 37,509	Woessner, Warren D.	Reg. No. 30,440
Gorrie, Gregory J.	Reg. No. 36,530	Nama, Prakash	Reg. No. 44,255		
Greaves, John N.	Reg. No. 40,362	Nelson, A. James	Reg. No. 28,650		

I hereby authorize them to act and rely on instructions from and communicate directly with the person/assignee/attorney/firm/organization/who/which first sends/sent this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct Schwegman, Lundberg, Woessner & Kluth, P.A. to the contrary.

Please direct all correspondence in this case to Schwegman, Lundberg, Woessner & Kluth, P.A. at the address indicated below:

P.O. Box 2938, Minneapolis, MN 55402
Telephone No. (612)373-6900

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of joint inventor number 1 : **Martin R. Prince**

Citizenship: **United States of America**

Residence: **New York, NY**

Post Office Address: **1161 York Avenue
Apt. 10H
New York, NY 10021**

Signature: _____
Martin R. Prince

Date: _____

☒ Additional inventors are being named on separately numbered sheets, attached hereto.

Full Name of joint inventor number 2 : **Ramin Zabih**
 Citizenship: **United States of America**
 Post Office Address: **400 E. 66th Street**
Apt. #7B
New York, NY 10021

Residence: **New York, NY**

Signature: _____ Date: _____
 Ramin Zabih

Full Name of joint inventor number 3 : **Yi Wang**
 Citizenship: **United States of America**
 Post Office Address: **6301 Morrowfield Avenue**
Pittsburgh, PA 15217

Residence: **Pittsburgh, PA**

Signature: _____ Date: _____
 Yi Wang

Full Name of joint inventor number 4 : **Richard Watts**
 Citizenship: **United Kingdom**
 Post Office Address: **16a Harrowdale Drive**
Christchurch, New Zealand

Residence: **Christchurch, New Zealand**

Signature: Richard Watts Date: February 7th, 2004
 Richard Watts

Full Name of joint inventor number 5 : **Junhwan Kim**
 Citizenship: **Republic of Korea**
 Post Office Address: **Walkerhill apt. 32-1202**
Kwangjang-dong, Kwangjin-ku
Seoul, South Korea

Residence: **Seoul, South Korea**

Signature: _____ Date: _____
 Junhwan Kim

Full Name of joint inventor number 6 : **Jeff Bezanson**
 Citizenship: **United States of America**
 Post Office Address: **171 Fox Meadow Road**
Scarsdale, NY 10583

Residence: **Scarsdale, NY**

Signature: _____ Date: _____
 Jeff Bezanson

Full Name of joint inventor number 7 : Hale Ersoy

Citizenship: **Turkey**

Residence: **Ankara, Turkey**

Post Office Address: **Nilkent Sitesi B-Block No:2**

Birlik Mah. Cankaya

Ankara 06550 Turkey

Signature: _____
Hale Ersoy

Date: _____

§ 1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is canceled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is canceled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

- (1) prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

- (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
- (2) It refutes, or is inconsistent with, a position the applicant takes in:
 - (i) Opposing an argument of unpatentability relied on by the Office, or
 - (ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

- (1) Each inventor named in the application;
- (2) Each attorney or agent who prepares or prosecutes the application; and
- (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.



SCHWEGMAN ■ LUNDBERG ■ WOESSNER ■ KLUTH

United States Patent Application

COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor I hereby declare that: my residence, post office address and citizenship are as stated below next to my name; that

I verily believe I am the original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled: **SYSTEM AND METHOD FOR GENERATING COMPOSITE SUBTRACTION IMAGES FOR MAGNETIC RESONANCE IMAGING.**

The specification of which was filed on September 17, 2003 as application serial no. 10/664,425.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with 37 C.F.R. § 1.56 (attached hereto). I also acknowledge my duty to disclose all information known to be material to patentability which became available between a filing date of a prior application and the national or PCT international filing date in the event this is a Continuation-In-Part application in accordance with 37 C.F.R. § 1.63(e).

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on the basis of which priority is claimed:

No such claim for priority is being made at this time.

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

Application Number

60/412,032

Filing Date

September 18, 2002

I hereby claim the benefit under 35 U.S.C. § 120 or 365(c) of any United States and PCT international application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose material information as defined in 37 C.F.R. § 1.56(a) which became available between the filing date of the prior application and the national or PCT international filing date of this application:

No such claim for priority is being made at this time.

I hereby appoint the following attorney(s) and/or patent agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith:

Anglin, J. Michael	Reg. No. 24,916	Harris, Robert J.	Reg. No. 37,346	Nielsen, Walter W.	Reg. No. 25,539
Arora, Suneel	Reg. No. 42,267	Jackson Huebsch, Katharine A.	Reg. No. 47,670	Padys, Danny J.	Reg. No. 35,635
Beekman, Marvin L.	Reg. No. 38,377	Jurkovich, Patti J.	Reg. No. 44,813	Parker, J. K.	Reg. No. 33,024
Bianchi, Timothy E.	Reg. No. 39,610	Kalis, Janal M.	Reg. No. 37,650	Peacock, Gregg A.	Reg. No. 45,001
Billion, Richard E.	Reg. No. 32,836	Klima-Silberg, Catherine I.	Reg. No. 40,052	Perdok, Monique M.	Reg. No. 42,989
Black, David W.	Reg. No. 42,331	Kluth, Daniel J.	Reg. No. 32,146	Peret, Andrew R.	Reg. No. 41,246
Brennan, Thomas F.	Reg. No. 35,075	Lacy, Rodney L.	Reg. No. 41,136	Peterson, David C.	Reg. No. 47,857
Chadwick, Robin A.	Reg. No. 36,477	Lemaire, Charles A.	Reg. No. 36,198	Prout, William F.	Reg. No. 33,995
Clark, Barbara J.	Reg. No. 38,107	Lundberg, Steven W.	Reg. No. 30,568	Schumm, Sherry W.	Reg. No. 39,422
Clise, Timothy B.	Reg. No. 40,957	Lundberg, Steven W.	Reg. No. 30,568	Schwegman, Micheal L.	Reg. No. 25,816
Cochran, David R.	Reg. No. 46,632	Maki, Peter C.	Reg. No. 42,832	Speier, Gary J.	Reg. No. 45,458
Dahl, John M.	Reg. No. 44,639	Malen, Peter L.	Reg. No. 44,894	Steffey, Charles E.	Reg. No. 25,179
DeLizio, Andrew	Reg. No. 52,806	Mates, Robert E.	Reg. No. 35,271	Stordal, Leif T.	Reg. No. 46,251
Drake, Eduardo E.	Reg. No. 40,594	McCrackin, Ann M.	Reg. No. 42,858	Tong, Viet V.	Reg. No. 45,416
Embretson, Janet E.	Reg. No. 39,665	Mehrle, Joseph P.	Reg. No. 45,535	Viksnins, Ann S.	Reg. No. 37,748
Forrest, Bradley A.	Reg. No. 30,837	Muller, Mark V.	Reg. No. 37,509	Woessner, Warren D.	Reg. No. 30,440
Gorrie, Gregory J.	Reg. No. 36,530	Nama, Prakash	Reg. No. 44,255		
Greaves, John N.	Reg. No. 40,362	Nelson, A. James	Reg. No. 28,650		

I hereby authorize them to act and rely on instructions from and communicate directly with the person/assignee/attorney/firm/organization/who/which first sends/sent this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct Schwegman, Lundberg, Woessner & Kluth, P.A. to the contrary.

Please direct all correspondence in this case to Schwegman, Lundberg, Woessner & Kluth, P.A. at the address indicated below:

P.O. Box 2938, Minneapolis, MN 55402
Telephone No. (612)373-6900

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of joint inventor number 1 : **Martin R. Prince**
Citizenship: **United States of America**
Post Office Address: **1161 York Avenue**
Apt. 10H
New York, NY 10021

Residence: **New York, NY**

Signature: _____
Martin R. Prince

Date: _____

☒ Additional inventors are being named on separately numbered sheets, attached hereto.

Full Name of joint inventor number 2 : **Ramin Zabih**
Citizenship: **United States of America** Residence: **New York, NY**
Post Office Address: **400 E. 66th Street**
Apt. #7B
New York, NY 10021

Signature: _____ Date: _____
Ramin Zabih


Full Name of joint inventor number 3 : **Yi Wang**
Citizenship: **United States of America** Residence: **Pittsburgh, PA**
Post Office Address: **6301 Morrowfield Avenue**
Pittsburgh, PA 15217

Signature: _____ Date: _____
Yi Wang

Full Name of joint inventor number 4 : **Richard Watts**
Citizenship: **United Kingdom** Residence: **Christchurch, New Zealand**
Post Office Address: **16a Harrowdale Drive**
Christchurch, New Zealand

Signature: _____ Date: _____
Richard Watts

Full Name of joint inventor number 5 : **Junhwan Kim**
Citizenship: **Republic of Korea** Residence: **Seoul, South Korea**
Post Office Address: **Walkerhill apt. 32-1202**
Kwangjang-dong, Kwangjin-ku
Seoul, South Korea

Signature:  _____ Date: 2 Feb 2004
Junhwan Kim

Full Name of joint inventor number 6 : **Jeff Bezanson**
Citizenship: **United States of America** Residence: **Scarsdale, NY**
Post Office Address: **171 Fox Meadow Road**
Scarsdale, NY 10583

Signature: _____ Date: _____
Jeff Bezanson

Full Name of joint inventor number 7 : **Hale Ersoy**

Citizenship: **Turkey**

Residence: **Ankara, Turkey**

Post Office Address: **Nilkent Sitesi B-Block No:2**

Birlik Mah. Cankaya

Ankara 06550 Turkey

Signature: _____

Hale Ersoy

Date: _____

§ 1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is canceled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is canceled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

- (1) prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

- (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
- (2) It refutes, or is inconsistent with, a position the applicant takes in:
 - (i) Opposing an argument of unpatentability relied on by the Office, or
 - (ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

- (1) Each inventor named in the application;
- (2) Each attorney or agent who prepares or prosecutes the application; and
- (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.



SCHWEGMAN ■ LUNDBERG ■ WOESSNER ■ KLUTH

United States Patent Application

COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor I hereby declare that: my residence, post office address and citizenship are as stated below next to my name; that

I verily believe I am the original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled: **SYSTEM AND METHOD FOR GENERATING COMPOSITE SUBTRACTION IMAGES FOR MAGNETIC RESONANCE IMAGING.**

The specification of which was filed on September 17, 2003 as application serial no. 10/664,425.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with 37 C.F.R. § 1.56 (attached hereto). I also acknowledge my duty to disclose all information known to be material to patentability which became available between a filing date of a prior application and the national or PCT international filing date in the event this is a Continuation-In-Part application in accordance with 37 C.F.R. § 1.63(e).

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on the basis of which priority is claimed:

No such claim for priority is being made at this time.

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

Application Number

60/412,032

Filing Date

September 18, 2002

I hereby claim the benefit under 35 U.S.C. § 120 or 365(c) of any United States and PCT international application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose material information as defined in 37 C.F.R. § 1.56(a) which became available between the filing date of the prior application and the national or PCT international filing date of this application:

No such claim for priority is being made at this time.

I hereby appoint the following attorney(s) and/or patent agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith:

Anglin, J. Michael	Reg. No. 24,916	Harris, Robert J.	Reg. No. 37,346	Nielsen, Walter W.	Reg. No. 25,539
Arora, Suneel	Reg. No. 42,267	Jackson Huebsch, Katharine A.	Reg. No. 47,670	Padys, Danny J.	Reg. No. 35,635
Beekman, Marvin L.	Reg. No. 38,377	Jurkovich, Patti J.	Reg. No. 44,813	Parker, J. K.	Reg. No. 33,024
Bianchi, Timothy E.	Reg. No. 39,610	Kalis, Janal M.	Reg. No. 37,650	Peacock, Gregg A.	Reg. No. 45,001
Billion, Richard E.	Reg. No. 32,836	Klima-Silberg, Catherine I.	Reg. No. 40,052	Perdok, Monique M.	Reg. No. 42,989
Black, David W.	Reg. No. 42,331	Kluth, Daniel J.	Reg. No. 32,146	Peret, Andrew R.	Reg. No. 41,246
Brennan, Thomas F.	Reg. No. 35,075	Lacy, Rodney L.	Reg. No. 41,136	Peterson, David C.	Reg. No. 47,857
Chadwick, Robin A.	Reg. No. 36,477	Lemaire, Charles A.	Reg. No. 36,198	Prout, William F.	Reg. No. 33,995
Clark, Barbara J.	Reg. No. 38,107	Lundberg, Steven W.	Reg. No. 30,568	Schumm, Sherry W.	Reg. No. 39,422
Clise, Timothy B.	Reg. No. 40,957	Lundberg, Steven W.	Reg. No. 30,568	Schwegman, Micheal L.	Reg. No. 25,816
Cochran, David R.	Reg. No. 46,632	Maki, Peter C.	Reg. No. 42,832	Speier, Gary J.	Reg. No. 45,458
Dahl, John M.	Reg. No. 44,639	Malen, Peter L.	Reg. No. 44,894	Steffey, Charles E.	Reg. No. 25,179
DeLizio, Andrew	Reg. No. 52,806	Mates, Robert E.	Reg. No. 35,271	Stordal, Leif T.	Reg. No. 46,251
Drake, Eduardo E.	Reg. No. 40,594	McCrackin, Ann M.	Reg. No. 42,858	Tong, Viet V.	Reg. No. 45,416
Embretson, Janet E.	Reg. No. 39,665	Mehrle, Joseph P.	Reg. No. 45,535	Viksmins, Ann S.	Reg. No. 37,748
Forrest, Bradley A.	Reg. No. 30,837	Muller, Mark V.	Reg. No. 37,509	Woessner, Warren D.	Reg. No. 30,440
Gorrie, Gregory J.	Reg. No. 36,530	Nama, Prakash	Reg. No. 44,255		
Greaves, John N.	Reg. No. 40,362	Nelson, A. James	Reg. No. 28,650		

I hereby authorize them to act and rely on instructions from and communicate directly with the person/assignee/attorney/firm/organization/who/which first sends/sent this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct Schwegman, Lundberg, Woessner & Kluth, P.A. to the contrary.

Please direct all correspondence in this case to Schwegman, Lundberg, Woessner & Kluth, P.A. at the address indicated below:

P.O. Box 2938, Minneapolis, MN 55402
Telephone No. (612)373-6900

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of joint inventor number 1 : **Martin R. Prince**

Citizenship: **United States of America**

Residence: **New York, NY**

Post Office Address: **1161 York Avenue
Apt. 10H
New York, NY 10021**

Signature: _____
Martin R. Prince

Date: _____

☒ Additional inventors are being named on separately numbered sheets, attached hereto.

Full Name of joint inventor number 2 : **Ramin Zabih**
Citizenship: **United States of America**
Post Office Address: 400 E. 66th Street
Apt. #7B
New York, NY 10021

Residence: New York, NY

Signature: _____ Date: _____
Ramin Zabih

Full Name of joint inventor number 3 : **Yi Wang**
Citizenship: **United States of America**
Post Office Address: 6301 Morrowfield Avenue
Pittsburgh, PA 15217

Residence: Pittsburgh, PA

Signature: _____ Date: _____
Yi Wang

Full Name of joint inventor number 4 : **Richard Watts**
Citizenship: **United Kingdom**
Post Office Address: 16a Harrowdale Drive
Christchurch, New Zealand

Residence: Christchurch, New Zealand

Signature: _____ Date: _____
Richard Watts

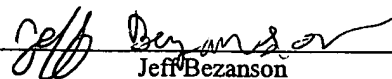
Full Name of joint inventor number 5 : **Junhwan Kim**
Citizenship: **Republic of Korea**
Post Office Address: Walkerhill apt. 32-1202
Kwangjang-dong, Kwangjin-ku
Seoul, South Korea

Residence: Seoul, South Korea

Signature: _____ Date: _____
Junhwan Kim

Full Name of joint inventor number 6 : **Jeff Bezanson**
Citizenship: **United States of America**
Post Office Address: 171 Fox Meadow Road
Scarsdale, NY 10583

Residence: Scarsdale, NY

Signature:  _____ Date: 2/8/04
Jeff Bezanson

Full Name of joint inventor number 7 : Hale Ersoy

Citizenship: Turkey

Residence: Ankara, Turkey

Post Office Address: Nilkent Sitesi B-Block No:2

Birlik Mah. Cankaya

Ankara 06550 Turkey

Signature: _____

Hale Ersoy

Date: _____

§ 1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is canceled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is canceled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

- (1) prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

- (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
- (2) It refutes, or is inconsistent with, a position the applicant takes in:
 - (i) Opposing an argument of unpatentability relied on by the Office, or
 - (ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

- (1) Each inventor named in the application;
- (2) Each attorney or agent who prepares or prosecutes the application; and
- (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.